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ABSTRACT

This conference paper examines issues regarding minimum competency testing, including: (1) the history and current status of minimum competency testing programs, in the U.S. and especially in the Midwest; (2) technical characteristics of minimum competency tests; (3) the relationship of minimum competency tests to the regular curriculum and testing program; (4) implementation and evaluation questions for minimum competency testing programs; and (5) accomplishment of minimum competency testing goals. (Author/APM)

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MIXING POLITICAL AND EDUCATIONAL AGENDAS

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Minimum Competency Testing: Mixing Political and Educational Agendas

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Since it acquired prominence in American education five years ago, minimum competency testing has become an important and controversial part of educational programs. The fact that one entire day of this policy seminar is devoted to the topic of minimum competency testing is evidence of the timeliness and importance of the topic.

I am pleased to have an opportunity to address some of the issues about minimum competency testing from the perspective of one who has been involved with various aspects of testing over the past several years. I have been very interested in the effects of minimum competency testing legislation and programs.

The purpose of my paper is to raise some issues about minimum competency testing that might bear upon discussions at this seminar. In particular, I wish to highlight the historical content of minimum competency testing programs, the areas of technical characteristics of minimum competency tests, the relationship of minimum competency tests to the regular curriculum and testing program, and evaluation questions for minimum competency testing programs. These areas have been generally overlooked because so much of the activity regarding minimum competency

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testing has been legal and political: that is, legal challenges to minimum competency tests raised through the legal process and the accountability issues that have surfaced in the political arena have dominated our attention.

History and Status of Minimum Competency Testing

To begin with, I wish to review some of the recent history of minimum competency testing and to summarize its current status. My purpose is to show three things. First, at the time minimum competency testing gained popularity, there were already accountability activities being developed at state and local levels. Second, the recent rapid increase in minimum competency testing received impetus primarily from forces outside of the educational community. And, third, a review of the current status of minimum competency testing reveals a patchwork of approaches.

It is most helpful to look at the history of minimum competency testing in periods prior to 1970, 1970-1975 and 1975 to the present. (In order to support my points this history will be very simplified. A detailed examination of the history would reveal a more complex situation than I describe, but it would not modify the trends described.)

Early History[1]

Perhaps the earliest example of a minimum competency testing program is the state testing program of the New York State Regents. Initiated in

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[1]See Chapter 1 of Elbel, R. L. Essentials of Educational Measurement 2nd Ed.), Englewood Cliffs, N. J. Prentice-Hall, 1972, for a more detailed history.

1865, this program has for over a century prescribed and tested content and skills to be mastered by all students in the state who wish to receive a Regents diploma. Another early example of large-scale minimum competency testing is seen in the Iowa Every-Pupil Test, a competitive academic testing program administered throughout Iowa beginning in 1929. This program eventually gave use to the well-known Iowa Tests of Basic Skills and the Iowa Tests of Educational Development used extensively around the nation.

These are but two examples of early large-scale testing programs that illustrate the point the educators have long been deeply interested in: the sound assessment of important educational outcomes. These and other programs were in place through the 1960's when the entire testing scene began to change.

1970-1975

In 1970 a new approach for monitoring the status of educational attainment in the United States was established through the first national survey conducted by the National Assessment for Educational Progress (NAEP). The purpose of NAEP is to provide a periodic reading of educational attainment in important areas identified by an advisory group of educators. As it was originally conceived, NAEP was not intended to be reflective of particular curriculum or educational approaches, but rather was intended to gather and supply information on a few important indicators of educational progress. (Whether or not NAEP has done this task adequately has been the subject of periodic debate, but that question is not directly related to this discussion).

Following the lead of NAEP and spurred by considerable legislative activity, many states began developing their own educational assessment programs. Some state programs followed the NAEP model to the extent of using NAEP test items and reporting format while other states developed totally new testing approaches. Whichever approach they took, the state programs had some common characteristics: (1) they were intended to be more geographically and, usually, instructionally reflective of the individual state situations, (2) data that were reported for accountability purposes were at an aggregate level (state, local, district, region or school), and (3) with a few exceptions, minimal contingencies that were attached to the accountability data. The period between 1970-1975 saw a rapid growth in a number of states undertaking assessment programs. In 1970, 30 states had assessment or other testing programs and 1975, 44 states had such programs.

1975-Present

In 1975 drastic changes in the nature of educational accountability began to occur. Concerned by declining test scores, apparently high levels of functional illiteracy and increasing educational costs, public demands for educational accountability were heard throughout the country. The result of this concern was political action by legislatures and state boards of education with more rigorous demands for accountability. A solution seemed simple. In order to demonstrate that they had attained an adequate level of learning, students must demonstrate their competence by passing a test.

The political activity around minimum competency testing during this time was particularly well documented by Chris Pipho of the Education Commission of the States. The frequency with which Pipho was required to

update his summaries of legislative activity provides us with ample evidence of the high public interest in minimum competency testing. It seemed to me then that all of the public frustration with the ineffectiveness of public institutions was focusing on a single solution--make kids pass a test before they can get out of school.

In a recent summary of legislative activity, Pipho[2] notes that 38 states had taken some form of action by the beginning of 1980, with most of the activity being in 1977 and 1978. (The exact number of states taking action is difficult to establish because of definitional problems. Pipho uses a broad definition of minimum competency testing, thereby capturing a wider array of activity than shown in other studies.) In response to the public concern about educational accountability, the early actions at the state level resulted in testing requirements for students. However, since 1978, only two states have taken action involving testing requirements. More recent state activity has dealt with the identification of students with lower academic attainment in earlier years for the purpose of remediation.

With legislation and state board action tapering off, activity at the state level has been directed toward implementing the mandated programs. By the end of this school year, many of the programs will be ready for full implementation. As noted by Pipho, "Changes in state mandates can be expected as more implementation problems and issues become evident.

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[2] Pipho, Chris, State Minimum Competency Testing Programs: Resource Guide. A final report prepared for the National Institute of Education under Grant NIE-G-79-0033, Education Commission of the States. 1980.

Court activity may be a crucial factor. The rights of special populations, such as handicapped and migrant students may be another factor in changing state programs."[3] In short, we've only begun to reach the stage where particularly important educational issues are becoming apparent.

Current Status

Given this brief history, let us examine the current situation of minimum competency testing in the United States. The status of programs was the subject of a study of 31 state and 20 local programs sponsored by the National Institute of Education. The executive summary of the study states:

> Sixteen of the 31 state-level programs were mandated by the State Board of Education, and 15 were initiated by the state legislature. Two of the legislated mandates call for temporary programs; one State Board initiated program and one legislated program permit voluntary participation of local school districts. Two other states emphasize the competency-based instructional aspects of their programs rather than the testing components....
>
> The majority of programs, both state and local, were developed in the two to three years since 1976, but the age of programs ranged from 18 years to less than one year with ongoing pilot testing. Fourteen state programs have been fully implemented, while 17 are being phased in. For example, many state programs are introducing new graduation requirements or curriculum changes over a period of years and hence, these programs will not be "in place " until some time in the future....
>
> Programs in only four states have had litigation associated with them in any way--Delaware, Florida, Maryland, and North Carolina--and the majority of this activity has occurred in Florida.
>
> With respect to goals and purposes, 14 states cited certification of basic skills competency prior to high school graduation as a major

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[3]Pipho, Chris, State Minimum Competency Testing Programs: Analysis of State Minimum Competency Testing Programs. A Final Report prepared for the National Institute of Education under Grant NIE-G-79-0033, Education Commission of the States. 1980.

purpose, and two states reported using competency achievement as one criterion for grade-to-grade promotion as a reason for implementing a minimum competency testing program. The most frequently cited purpose for instituting such a program was to identify students in need of remediation; 19 states reported this purpose. Curriculum improvement was mentioned by 10 states as a major program goal....

Reading and mathematics were competency areas assessed in all state and local programs. Twenty-seven of the state programs assessed skills in language arts and/or writing, while 15 local districts assess these same skills. Skill in other subject areas, such as speaking, listening, consumer economics, science, government, and history, are assessed in only a few programs. Almost all of the tests administered in both state and local programs consist primarily of multiple-choice items, and a non-multiple-choice assessment.[4]

In short, the initial activity mandating minimum competency testing programs reflected the public desire for stringent accountability of students, and testing for graduation was the primary emphasis. With time, that approach was perceived as too narrow and attention shifted away graduation requirements.

Minimum Competency Testing Activity in the Midwest

There are people representing 12 central states participating in the Midwest Policy Seminar. The states represented are Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Minnesota, Nebraska, Ohio, Tennesee, and Wisconsin. In this section of the paper the minimum competency testing activity in the participating states is summarized.

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[4]Gorth, W. P., Perkins, M. R., A Study of Minimum Competency Testing Programs: Final Summary and Analysis Report. Amherst, MA: National Evaluation Systems, Inc. December 1979.

The studies referenced earlier in the paper indicate that minimum competency testing action has been taken at state level in eight states in this region--Illinois, Indiana, Kansas, Kentucky, Michigan, Missouri, Nebraska, Tennessee. (Action at the local district level is not summarized in the studies on which I am relying.) Table 1 summarizes the programs in these eight states according to the dimensions of (1) the type of action taken, (2) the responsibility for setting the standard, (3) the responsibility for writing or selecting a test, (4) the grade areas being assessed, (5) skill areas to be assessed, (6) the use of the standards and the tests, (7) the implementation schedule, (8) the ways in which special populations are to be tested, and related information that should be noted.

Of the eight states which have experienced action from the state level, three have mandates through legislative action, four have mandates through state board (or state department) action and one has a mandate through a combination of the two.

Responsibility for test selection or development resides primarily at the state level, with six of the eight giving responsibility to the state. However, responsibility for setting standards is treated differently--only three of the states maintain that responsibility.

It is difficult to summarize what grade levels are assessed across states because so many combinations are possible. In Illinois, the optional nature of the program and the fact that the program is still under study results in no specific grade level requirements. Of the remaining states, six require testing at some point in grades one through six, seven require testing somewhere in grades seven through eleven, and only one requires testing in grade twelve.

Table 1
Selected Characteristics of
Minimum Competency Testing Programs
for Eight Midwest States

State	Action Taken	Responsibility for Setting Standards	Responsibility for Writing or Selecting Test	Grade Areas to be Assessed	Skill Areas to be Assessed	Use of Standards and Test	Implementation Schedule	Special Populations	Related Areas	Comments
Illinois	Legislation enacted in 1978: SB 238.	Local school districts with assistance of the state board of education.	Local school districts will carry out this activity with assistance from the state board of education.	Local districts will make decisions with assistance of the state board of education.	Local districts will make decisions with assistance of the state board of education.	Local districts will make decision with the assistance of the state board of education.	Under department of education supervision, the following activities have taken place: 1. Materials prepared: *Performance Indicators For Competency Assessment*. A package of materials developed with assistance of the Northwest Regional Education Laboratory to assist local districts in establishing a process to obtain and organize student competencies. 2. Workshops: Seven regional meetings were held for approximately 1,000 educators from local districts. General information on minimum competency testing was provided.	Not mentioned in legislation.		The enacted legislation calls for the state board of education to prepare procedures and guidelines to encourage and assist local school districts to develop minimum competency testing programs. The state department of education activities are to be started by December 1978 and a comprehensive report ready for the legislature by the spring of 1980.
Indiana	State board of education resolution adopted February 1978 and amended October 27, 1978.	Standards are to be set by local school districts with assistance of an advisory committee composed of teachers, administrators, parents and community members.	Local school districts may develop their own tests based on local objectives, request assistance from the department of public instruction in developing tests consistent with local objectives or purchase a commercially prepared test.	Grades 3, 6, 8 & 10.	Reading, composition and spelling. Social studies to be added in 1979, mathematics in 1980, and science in 1981.	To be used for instructional improvement and remediation. Local districts have the option of using test scores as a local graduation requirement in addition to the established state graduation requirements.	In support of the state board ruling, the department of public instruction has prepared an implementation guide — *Indiana Comprehensive Assessment and Program Planning System* — for local districts. The guide describes the comprehensive evaluation process and gives specific recommendations on the formation of local advisory committees, adoption of goals and objectives, test development and parent reporting.	Mentally handicapped, learning disabled and emotionally disturbed students shall be excluded. Non-English dominant students shall be excluded. Sensory or physically handicapped students shall have the program administered in a manner appropriate with their needs.		

Excerpted from Pipho (1980), pp. 30-56, (see footnote 3).

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Table 1 continued

State	Action Taken	Responsibility for Setting Standards	Responsibility for Writing or Selecting Test	Grade Areas to be Assessed	Skill Areas to be Assessed	Use of Standards and Test	Implementation Schedule	Special Populations	Related Areas	Comments
Kansas	Legislation enacted in 1978. Senate Substitute for HB 3115.	State board of education.	The state department of education under direction of the state board of education will develop the test and coordinate all activities	Grades 2, 4, 6, 8 & 11.	Reading and mathematics.	The legislature will consider the need for establishing standards and a statewide system of competency-based education during the 1980 interim and 1981 session.	The state department of education, using a statewide assessment steering committee, developed a criterion-referenced reading and mathematics test which was administered to a cross section of students in April of 1979. Beginning in the fall of 1979 the pilot test will be revised. Approval of new test items will be completed by November 1979; standards set by March 15, 1980; inservice orientation and distribution of tests to start on March 15, 1980 and the test administered during April of 1980. Analysis is to be completed by July 1980. Science Research Associates (SRA) developed and administered the pilot test. The University of Kansas obtained the contract to develop the second year test. The legislature appropriated $60,000 for '78-'79 and $190,000 for '79-'80 test implementation.	Exceptional children will be excluded from the program. State accredited non-public schools will be included in the testing program.	State board policy adopted in January 1978, superseded by Sub. HB 3115.	The law calls for a two-year pilot testing effort to be conducted by the state board of education. The results of the effort will be used by the legislature to determine long range needs and programs. School districts are to participate on a volunteer basis in the 1978-79 school year and all districts will participate in the 1979-80 school year. Results of the two year test effort will be reported to the legislature late in the 1979-80 school year. The legislature is expected to study the results during the interim between the 1980 and 1981 session.
Kentucky	Legislation enacted in 1978. HB 379, Ch. 151	Local districts are to develop educational improvement plans. (See Use of Standards and Test for additional information.)	The department of education is to develop and implement a statewide assessment program.	Grades 3, 5, 7 & 10	Reading, writing, spelling, language arts and mathematics.	Tests are not to be used for graduation or grade level promotion. Test results are to be used for the development of local district education improvement plans. The law also contains a provision that test results "... shall not be used for the evaluation of teachers or administrators for the purpose of promotion, demotion, transfer or dismissal."	The department of education used the Comprehensive Test of Basic Skills (CTBS/S) as a screening test to identify students in grades 3, 5, 7, & 10 most in need of assistance. A plan is being developed which will allow local school districts to use a state diagnostic test or choose an appropriate alternative form of diagnostic test. The department of education has developed an implementation manual, *Education Improvement-Implementation Manual for the Kentucky Education Improvement Act of 1978*.		The state board of education adopted a 4-year competency plan in 1977. The policy was superseded by Ch. 151. The state board resolution called for a test as a graduation requirement. The provision was dropped in Ch. 151.	The law calls for the governor to appoint an 18-member state advisory committee for education improvement. Citizens, parents, teachers and administrators are to be represented on the committee.

Table 1 continued

State	Action Taken	Responsibility for Setting Standards	Responsibility for Writing or Selecting Test	Grade Areas to be Assessed	Skill Areas to be Assessed	Use of Standards and Test	Implementation Schedule	Special Populations	Related Areas	Comments
Michigan	State board of education resolution adopted in late 1960s detailing a six-step accountability process Supporting legislation was enacted in 1969	No standards as such in the accountability mandates	State department of education	Grades 4 & 7. All students Grade 10. Voluntary school district participation	Reading & mathematics (Science, health, physical education, art, music and social studies have been used in developing performance objectives and tests.)	Assessment program designed for local district use in instructional improvement, remedial assistance etc. One of the purposes of the accountability program is to identify on a statewide level minimum levels of pupil achievement in the basic skills.	The state department of education began development of assessment instruments for grades 4 and 7 in the early 1970s and first administered the assessment instruments in 1972-73. School districts and a test contractor assisted with development of test items. Additional subject areas are under study, with new assessments for all students in grades 4 and 7 scheduled for 1979 and 1983. Statewide sample testing is scheduled for grades 4, 7 & 10 in career development, health education and listening.			Legislative support for full scale testing at grade 10 is being sought. Life role competencies for high school students have been under study since 1974.
	1974 State Board Resolution established minimum performance objectives for elementary and junior high school levels	State board through advisory committees		Grade 12 under study.	Life role competencies under study for grade 12.					
Missouri	State board of education resolution adopted in 1976 Policy modified in 1978 to require all 8th grade students to take test	State department of elementary and secondary education	State department of elementary and secondary education has developed Basic Education Skills Test (BEST) for use at the grade 8 level	Grade 8	The application of reading, language arts, mathematics and government/economic skills	No mandate for grade promotion or graduation. Stated purpose of the test: "to identify students who may be having difficulty with basic skills. Local school districts may use the results for improving the instructional program and for offering remedial assistance."	The department of elementary and secondary education pilot tested the BEST test in grades 8, 10 & 12 in 51 of 480 districts in 1977. In the spring of 1978, 60,000 students participated in a voluntary administration of the test. Full scale testing of all 8th grade students was scheduled for the spring of 1978.	Handicapped students participate in the BEST program in a manner consistent with their written Individualized Education Plan (IEP). The IEP may specify exclusion or special testing techniques. The student test record is to note any exclusions or special testing techniques used.		The BEST test consists of 13 objectives in each of three subject areas with three test items per objective. Plans are being made by the department of elementary and secondary education to copyright the test.

Table 1 continued

State	Action Taken	Responsibility for Setting Standards	Responsibility for Writing or Selecting Test	Grade Areas to be Assessed	Skill Areas to be Assessed	Use of Standards and Test	Implementation Schedule	Special Populations	Related Areas	Comments
Nebraska	State department of education required ruling in 1975	Local school districts	The state department of education developed the Nebraska Assessment Battery of Essential Learning Skills (N-ABLES) to assist districts in establishing minimum performance levels. Local districts may develop their own testing program	Begins in grade 5 and continues until mastery is achieved by each student in each skill area	Reading, writing and mathematics	The N-ABLES test is not to be used for grade retention or promotion. Local districts may use their own testing programs to establish graduation or grade promotion standards.	The department of education developed the N-ABLES test in 1975 and completed a revision of the battery in 1977.			School districts using the N-ABLES test must sign an agreement with the state before giving the test to students. The agreement calls for continuous reviewing, the availability of remedial work for those in need and the use of the test for identification purposes with grade level or other promotion use banned.
Tennessee	State board of education resolution adopted Nov 18, 1977 created an Elementary and Secondary Program	Secondary Level: State department of education	State department of education	Grades 11 and 12	Reading, mathematics, grammar and spelling	For high school graduation beginning with the class of 1982	The state department of education worked on preliminary mandated testing activities during 1978. The Denver Proficiency and Review Test pilot was used with 4,250 high school seniors in 1977. The department contracted with C T B./McGraw Hill to prepare an eighth-grade test administered to eighth graders in the spring of 1978			
		Elementary Level: Local districts	Local school districts	Grades 4, 5, 8 & 9	Subjects at discretion of local school districts	For remediation purposes	The department of education, following a conference in 1977 on the theme "Elementary Curriculum: Goals and Implementation," appointed a committee of 45 teachers with the cooperation of the Tennessee Education Association and developed a means by which student expectations on the basic skill areas could be identified. In June of 1978, a guide was released by the department entitled *Student Expectations in the Basic Skills, K-8*. The subject areas of reading, language arts and mathematics were covered in the guide			

As one would expect, the most prominent content area in which testing is done is reading; seven states require that area to be assessed. Three states require assessment in writing, two in spelling and one in language arts. Six states require assessment in mathematics with one state requiring assessment in mathematics application skills. In other content areas, Indiana requires assessment in composition; Missouri, assessment in governance/economics; and Tenneesee, assessment in grammar.

The use of the minimum competency testing in states represented at this seminar contrasts sharply with the original reasons that minimum competency testing programs were initiated. Only one state in this region is using the minimum competency test for high school graduation (Tennessee for the class of 1982). Six state programs are directed toward instructional improvement and remediation. As noted earlier, the situation in Illinois is still under study and subject to local control.

Nowhere is there more difficulty in implementing minimum competency testing programs than in assuring fair treatment for special populations. Where attention has been given to these populations, two groups--non-English speaking and handicapped--have received the most attention. The most common solutions for meeting the needs of these students has been to (1) exclude them entirely from the program, or (2) to test them with special instruments or approaches that match their particular situation. For example, use of non-English test or non-paper and pencil test have been considered. Of the states in this region, three (Indiana, Kansas and Missouri) have given attention to special populations in their legislation.

Minimum Competency Testing Issues

Having reviewed the history and current status of minimum competency testing, let us turn to some issues related to the adoption and implementation of minimum competency testing. There are three types of issues that I wish to consider--general educational issues, implementation issues, and evaluation issues.

General Educational Issues

Reviews of the literature about minimum competency testing often uncover a number of arguments for or against. In the literature about minimum competency testing and in the seminar papers from Chicago, Missouri and Wisconsin, three general issues about minimum competency testing seem to emerge.

1. Does minimum competency testing support our conception about responsibility for education?
2. Does minimum competency testing fit into existing curriculum and testing programs?
3. Can we accomplish the goals of minimum competency testing programs within our financial, human and technical resources?

I would like to treat these questions in order.

Minimum Competency Testing and the Responsibility for Education. Many people and groups are responsible for the education of a student. Teachers, administrators, churches, parents, community and social groups all contribute to a child's education. We value the input of each of these sources to education, but the multiple sources of input can serve to obscure the individual responsibility of each source.

In his thought provoking paper, Tomlinson[5] provides a historical sketch of how the responsibility for learning has been assigned in American education. According to Tomlinson, prior to 1950 teachers were considered to be a constant factor in American schools. The variables which determined differential success were student ability and student effort. The social dynamics after 1950 completely reversed this conception. The students were regarded as constant and the variables were the educational programs and teachers which the students experienced.

Whether or not we agree with Tomlinson's argument, it raises a point demanding our attention. Specifically, what are the unique responsibilities of different people and groups in contributing to a child's education? Minimum competency testing addresses the issue of responsibilities squarely: Responsibility for learning is the student's and the areas in which learning is required are those specified in the law or mandate, typically the basic or life skills. Unfortunately, responsibility is too often assessed in a punitive manner and the responsibilities of others are ignored.

In my view we should address the issue of responsibility in several ways. First, we should narrow examination of contributors to education to those who provide the structured opportunities for learning (the schools) and those who are responsible for doing the learning (the students). There are other people with other responsibilities, but we cannot be assured that those responsibilities will be carried out for any given student.

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[5]Tomlinson, Tommy M. "Thirty Years of Trouble: An Interpretive Analysis of Public Schooling Since 1950." National Institute of Education, April, 1980.

The responsibility of the schools is to provide every student with an opportunity to learn. This means that schools should provide sound educational programs in well-managed learning environments, and schools should teach students how to efficiently take advantage of those programs. Students, for their part, should understand that they are responsible for learning. To use Tomlinson's term, they are the locus of production. They and only they can learn, and each student has an individual responsibility to do so. Thus, education requires a joint effort which cannot occur unless both groups meet their individual responsibilities. Whatever allocation of responsibilities for learning is adopted, it must be remembered that different approaches to minimum competency testing may support or undermine it.

Minimum Competency Testing and the Ongoing Educational Program. As noted earlier, recent minimum competency testing activity has emphasized implementation, and the profound effect that it can have on educational programs is becoming increasingly clear. Problems seem to occur because educators are now trying to put political ideas into educational practice. The result is an educational program that has many built-in-inconsistencies: that is, there are many mismatches between the goals of the existing instructional and testing programs and the imposed goals of the minimum competency testing programs.

The mismatches can be illustrated by examining the way in which a minimum competency test relates to the full range of educational assessment contexts. To understand the relationship of minimum competency testing to the overall testing program it is necessary to gain

an overview of the different educational assessment contexts. According to Anderson, Stiggins, and Gordon[6] there are eight basic contexts:

A. Instructional Management

1. Diagnosis
2. Placement
3. Guidance

B. Entry or Exit Decisions

4. Selection
5. Certification

C. Programmatic Decisions

6. Summative Decisions
7. Formative Decisions
8. Survey Assessment

Given these contexts, let us contrast the assessment proposed through minimum competency testing to the assessment that is typically done by teachers. Minimum competency testing almost always implies student certification. In particular, it means certification for graduation, passing from one grade to the next, or, more basically, certification that some minimum level of learning has taken place. The characteristics of a certification test are that they measure a sample of skills representing a broad range of behaviors.

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[6]Anderson, B. L., Stiggins, R. J., Gordon, D. W., Educational Testing Facts and Issues: a layperson's guide to testing in the schools. Northwest Regional Educational Laboratory, Portland, OR., 1980.

Testing done by teachers in the classroom, however, is usually done for a different purpose--diagnosis. Diagnostic tests have considerably different characteristics than certification tests. They provide in depth measurement on a narrow range of skills to allow precise determination of what a student has and has not mastered.

The contrast is important for the following reason: the educator's response to minimum competency testing mandates has been to try to fit minimum competency testing into the educational program as a diagonistic assessment device. The resulting mismatch is apparent; a minimum competency test is a certification test that has many different characteristics than a diagnostic test. This mismatch creates a natural tension between two competing sets of goals at the outset.

The situation I have just described regarding the testing program illustrates an issue that occurs with respect to other aspects of the existing educational program. A closer examination of the instructional and classroom management areas would reveal the opportunity for mismatches occuring there as well.

Accomplishing MCT Program Goals. A prevalent concern expressed by a broad range of educators is whether it is possible to accomplish the underlying goals that minimum competency testing programs represent. That is, are we able to implement programs that will assure that all students graduating from high school will have the basic life and academic skills to successfully carry out occupational and social tasks? There are two parts to the question about our abilities to accomplish these tasks. The first is whether we have the technical capabilities to

define and measure the competencies at the appropriate level, and, second, whether we are willing to allocate the human and financial resources necessary for implementation.

Let us examine the various parts of the first question. As an initial step it is necessary to be able to determine competencies which, when held by an individual, will assure that that individual will be able to accomplish some specified tasks. What are these competencies? It depends on what tasks one wishes to successfully accomplish. It is self evident that the competencies required for those at this seminar are different from those required of a group of artists, skilled workers, lawyers, plumbers or some other group. You may accuse me of choosing unfair examples for those that I have chosen represent specific occupational roles. Nevertheless, the point is that the minimum skills that any person needs is determined by the occupational and social situation of that person. Thus, specification of a single set of competencies that are appropriate for a broad group of people is very difficult to do. If we were to find a single set of skills that is truly appropriate for the entire population, I think the resulting skills would be such a low level as to be meaningless.

The nature of minimum competency testing puts special demands on the assessment procedures used. One reason is that many of the tests are intended to measure life skills--those competencies that are required in everyday life. Another reason is that many of the tests are intended to reflect a local or state curriculum and also to span various grade

levels. Therefore, readily available published paper and pencil tests may not always meet the measurement needs in minimum competency testing programs.

In order to provide the type of measurement that seems appropriate for their minimum competency testing programs, many states have undertaken to develop their own tests. In doing so, they have affirmed for themselves a fundamental rule about test development: it can be difficult and expensive to do properly. Few of these tests have had to withstand rigorous examination as of yet. It appears that while some of the tests have been developed very well, others have not had adequate attention. As close scrutiny of minimum competency tests occur (sometimes in court), the technical characteristics of the tests will likely become a major concern.

New approaches to testing and test development have also been tried. Applied performance testing (assessing skills in real or simulated settings) appears promising for measuring attainment of life skill areas and such academic areas as writing and speaking. For all their promise, it is difficult to use applied performance tests on a broad basis because of the cost and inefficiency of giving and scoring such tests. Current research at the Clearinghouse for Applied Performance Testing at Northwest Regional Educational Laboratory is directed at making the large-scale use of such tests more feasible.

Perhaps the one area that is currently receiving the most attention is test development through the use of item banks. The promise of this approach is that tests can be developed using existing items so that the high cost of item development can be eliminated. A recent survey

identified more than 20 large item banks that are accessible.[7] For all of their promise, there is much to be learned about the use of item banks. A particularly problematic question is how to avoid the need for pilot testing instruments each time a new set of items is assembled. This problem may be solved by another promising, but insufficiently tested, approach--the use of latent trait models such as the Rasch model. Latent trait models allow us, under certain conditions and with certain assumptions, to assign a weight to each of a number of items so that groups of these items may be combined into tests that have known technical characteristics. Commissioner Mallory has described the use of one of these promising models in the state of Missouri. If further reserch with these models is positive, they will provide us an important solution to a particular knotty problem.

From the earliest discussions of minimum competency testing, considerable discussion centered around the ability to make decisions about students on the basis of tests. In particular determining standards, or setting "cut scores", for passing a test was identified as a major problem. Briefly stated, the problem that arose was how can one set a test score such that students scoring above that point will be likely to have future success while students scoring below it will not. For simple tasks, setting an appropriate cut score is straightforward, but for the complex skills that are represented in minimum competency

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[7]Hiscox, Michael D., Brzezinski, Evelyn J. A Guide to Item Banking In Education. Northwest Regional Educational Laboratory, Portland, Or., 1980.

testing (life skills or higher level academic skills) the problem is extreme. What is to say that a student scoring 78% on a test of life skills is going to be successful in life whereas a student who scores a mere 73% will not be? Can we really withhold a diploma from the lower scoring student and feel comfortable awarding a diploma to the higher scoring one?

The issue of standard setting has received insufficient recent attention because so many other issues have dominated the implementation process. Nevertheless, the probler remains. Several approaches for setting standards have been posited, but all of them (save those which are logistically impossible to use) ultimately rely upon arbitrary judgment. In reality, standards are set more on political and logistical grounds than upon their predictive ability. Test standards appear to be set at a score that is face valid (e.g., around 70% meets general acceptance).

In summary, the many technical issues in the implementation of minimum competency testing still remain unresolved. It appears that the technical problems are not receiving the attention that is being given to other issues. This fact attests to the pressing nature of other problems more than it does the ability to solve the technical problems.

As noted earlier, an issue related to the issue of technical capability is whether we have the human and financial resources to adequately accomplish the goals of minimum competency testing programs. Because minimum competency testing programs can affect so many aspects of the educational system, it is difficult to ascertain what the true costs

of implementation are. Further, many of the needed resources are gained by diverting attention from ongoing instructional and testing programs, and these costs do not show up on any ledger. However, we are not totally without cost estimates for it. According to one paper prepared for the Illinois Department of Education, "Implementation of the state developed and administered minimum competency testing, with the state reporting system, would cost at least $10 per student or approximately 1.5 million dollars for each grade level tested."[8] Other test options such as using commercially available tests or requiring purchase and administration at the local level could reduce costs at the state level but distribute the costs elsewhere. Test development is one of the costs associated with minimum competency testing programs and the development of tests of moderate length can easily cost in excess of $40,000.

Also according to Kerins, remediation has been another major cost consideration.

> Depending upon the cut-off score, rates of failure on tests can range from 2.5% to 25%. If 150,000 students were tested, failures could range from 3,750 to 37,500. If the excess cost of remediation is approximately $300 per student, a figure based on current Title I guidelines as well as estimates in the literature, remedial costs would range from $1,125,000 to $11,250,000.
>
> Some states which have mandated a minimum competency test have also provided accompanying funds for remediation. Florida allocated $10,000,000 in 1977 but was forced to increase that amount to $28,600,000 in 1979. (Florida's student population is two thirds the size of Illinois'.) New York requires each school district to fund its own remedial programs, but has allocated an additional $150,000,000 for supplemental services for students who fail. New Jersey, through its state compensatory education program, allocated $67,000,000 for students who failed to meet state standards. (New Jersey's student population is 57 percent of Illinois'.) (p.10).

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[8]Kerins, Tom, "Synthesis of Minimum Competency Testing Studies" (A Report submitted to the Illinois State Board of Education 2/28/80.)

The decision to undertake a minimum competency testing program carries along the need to allocate substantial resources for program development and implementation. It is important to weigh the benefits to be gained against the required resources.

Implementation Issues

When a decision has been made to implement a minimum competency testing program, several issues beyond to the above general educational issues must be considered. A list of those issues, as summarized by Mary Perkins[9] is given below. Because these implementation issues are of less consequence to this policy discussion, I will list them without elaboration.

--What kinds of competencies shall we define (e.g., life skills, basic skills)?

--Who will have responsibility for defining the competencies?

--How do we set standards?

--What standards shall we set?

--Do we develop or select tests? How do we do either?

--If we develop a test, how do we ensure its fairness?

--Shall we have different tests/standards/competencies for racial groups/ethnic groups/special education students/limited English-speaking students?

--Who is to administer the tests?

--What kinds of scores do we want to compute?

--Who do we report results to?

--Do we disseminate just test results, or the tests themselves?

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[9]Gorth, W. P., Perkins, M. R., A Study of Minimum Competency Testing Programs. Final Program Development Resource Document. Amherst, Mass. 1979.

--How does this decision affect test development?

--How do we use what money we have most effectively?

--What is a good way to manage this program?

--Do we want to build in formative/summative evaluation of the program? Shall we systematically study the impacts of our program?

--How will we know if and when our goals have been met?

--After minimum competency testing, what?

Evaluation Issues

Despite concerted efforts toward implementation of minimum competency testing programs, little has been accomplished in evaluating them. Clearly it is time we begin asking the questons: What benefits are we receiving for our investment of resources? What problems are we having? Can the problems be corrected? Should we maintain the programs?

While there are many areas in which these programs can be evaluated, I propose we examine at least a few of the most salient.

1. Student outcomes. Are there changes in the levels of student academic achievement? Can we expect long term changes in student performance, such as in the area of the application of life skills? Have the programs had any effect on the level of student retention in school? Do these programs have differential effects on different types of students, such as low achieving or high achieving students?
2. Cost. What is the dollar outlay required to develop and implement the programs? What are our tradeoffs; that is, what programs or activities are we giving up to have minimum competency testing programs? What hidden costs at the state and local levels are we incurring?

3. Technical quality. What is the technical quality of the instruments that are being used to make decisions about students? Have the instruments had an adequate try-out? Do the instruments relate to the educational program? Can we be completely confident that the instruments are adequate to support all of the decisions that we make based upon them.

4. Adequacy of the competencies. Are the competencies clearly important for ensuring a student's future success? Are they appropriate for all students? Is there reason to believe that attainment of these competencies will have a significant beneficial effect for students?

5. Equity considerations. Is the program fair for all students? Are there groups of students, particularly minority groups, who fare poorly under the program?

6. Impact upon the educational programs. Does the minimum competency program promote the goals of the curriculum? Does program mangement and administration create undue burdens on people at various levels? What is the impact of the minimum competency testing program on the breadth and depth of the curriculum?

Minimum competency testing deserves and demands our close attention. While it gives the opportunity for educational benefits, it carries the potential of creating problems in existing educational programs. In order for benefits to be realized, the impact of minimum competency testing programs on the entire educational program must be continually examined.